

TECHNICAL REVIEW DOCUMENT
for
RENEWAL of OPERATING PERMIT 95OPOT071

La Junta Municipal Utilities

Otero County
Source ID 0890003

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December 2007

I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued August 1, 1997, with the first renewal issued February 1, 2002, and expired on January 31, 2007. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted January 30, 2006. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. Description of Source

This facility generates electricity for primary, emergency, and peaking use and is classified under the Standard Industrial Classification code 4911. The facility consists of nine (9) internal combustion engines driving electrical generators. Five of the engines are run on diesel fuel while the other four engines are capable of running on diesel, or a mixture of diesel fuel and natural gas. Two of the engines

are designated as inoperable and used for spare parts. The facility has an approximate electrical generation capacity of 18 mega-watts (MW).

The engines had the following installation dates:

S001 – 1939	S004 – 1942	S007 – 1962
S002 – 1939	S005 – 1950	S008 – 1962
S003 – 1939	S006 – 1958	S009 – 1971

Engines S001 and S005 are inoperable and used for spare parts only. Engines S002, S003 and S004 are diesel fired while engines S006, S007, S008 and S009 may use either diesel fuel or a mixture of diesel fuel and natural gas.

The facility is located in the city of La Junta, Otero County, Colorado. It is bounded by First Avenue, Bellview Avenue, and Highway 50. The area in which the plant operates is designated as attainment for all criteria pollutants. There are no affected states within 50 miles or Federal Class I designated areas within 100 kilometers of the plant.

Based on information supplied by the permit applicant, the facility is not subject to the requirements of Section 112(r)(7), the Accidental Release Plan Program of the Clean Air Act. This facility, at approximately 18 MW, is exempt under 40 CFR 70.6 (b)(2) from the Title V (Acid Rain) program. There are no pollutant-specific emission units at the facility that use a control device to achieve compliance with any emission standard or limitation. Therefore, the Compliance Assurance Monitoring (CAM) rule provisions do not apply.

Colorado Construction Permits were not required prior to 1972. Because the various units are considered “grandfathered” from existing Construction Permit requirements (Colorado Regulation No. 3, Part B, Section I.A.), there are few applicable requirements. The units have no limits for most pollutants. However, the actual emissions must be calculated for fee and inventory purposes.

Information on the design heat rates for the dual fuel engines is no longer available.

La Junta submitted information that a 10% diesel fuel/90% natural gas fuel mixture represented the approximate actual design for the dual fuel engines. While the Division does not necessarily accept there is anything to preclude La Junta from using a higher percentage of natural gas in the fuel mixture, the Division accepts the calculation of the Potential To Emit based on the 10/90 fuel mixture in the absence of credible evidence to indicate to the contrary. The Potential To Emit values shown elsewhere in this document are based on the dual fuel engines running 8760 hours on diesel fuel only, or 8760 hours operating on dual fuel (10% diesel fuel and 90% natural gas).

This source is considered to be a major source for nitrogen oxides (NO_x), sulfur dioxides (SO₂) and carbon monoxide (CO) in an attainment area (Potential to Emit > 250 Tons Per Year) but was constructed prior to the creation of the Prevention of

Significant Deterioration (PSD) regulations on December 5, 1974, and the adoption of the current regulation on August 7, 1980.

In general, equipment (including internal combustion engines burning fossil fuel containing sulfur) are subject to the Colorado Regulation No. 1 and No. 6 standards for SO₂. However, total facility emissions are below three (3) tons per day and the Division is not aware of any violations of Federal or State Ambient Air Quality Standards. Therefore, the facility is exempt from Regulation No. 1 SO₂ process based standards (Regulation No. 1, Section VI.A.2.). Additionally, all subject equipment was installed prior to the applicability date (January 30, 1979) for the Regulation No. 6 SO₂ standard. Therefore, no specific SO₂ limitations were included in the renewed Operating Permit.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to reflect the most recent emission factors and emission estimates (based on actual fuel consumption).

Facility-wide emissions are outlined below:

Pollutant	Potential-to-Emit (tons/yr)	Actual Emissions – 2005 (tons/yr)
PM ₁₀	147.5	1.3
PM	154.4	1.3
SO ₂	33.1	0.3
CO	557.5	4.7
NO _x	2901.9	18.3
VOC	147.9	1.3

See the October 10, 2001 Technical Review Document for the more detailed PTE calculation. PTE based on maximum fuel use and a diesel sulfur content of 0.05%. La Junta Municipal Utilities reported this as the sulfur content of their fuel. Actual emissions are based on the APEN submitted 1/30/2006 and represent the year 2005 emissions.

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII) Applicability:

This regulation does not apply since all the engines were constructed prior to July 11, 2005. No modifications or reconstructions have occurred since July 11, 2005.

III. Discussion of Modifications Made

Based on the information provided in the renewal application, the following changes have been requested:

- Update the permit contact information.
- Modify the opacity monitoring requirement to an annual requirement.
- Removal of the fuel sulfur content permit requirements.

Source Requested Modifications

The permit contact information has been updated.

La Junta Municipal Utilities has requested to modify the quarterly engine opacity monitoring requirement to an annual requirement. The Division reviewed La Junta's previous inspection reports and did not discover a history of opacity exceedances. A review of the permits for similar facilities reveals that the Division typically requires an annual opacity reading on each engine. Based on this information, the Division will modify this permit to require an annual opacity reading for each engine. In addition, an opacity observation shall be required when start-up takes longer than 10 minutes, or non-routine visible emissions are detected for longer than 60 minutes.

La Junta has requested the Division to remove the permit language regarding the diesel fuel sulfur content. This permit contains no specific limits on emissions of SO₂ and the Division agrees that a sulfur content condition is not necessary since it is not required to support compliance with an emissions limit. This condition will be removed. However, La Junta should maintain evidence of the fuel oil sulfur content to support their annual emission calculations that get reported on the submitted APENs.

Other Modifications

In addition to the requested modifications, the Division has included changes to make the permit more consistent with recently issued permits, included comments made by EPA on other Operating Permits, as well as corrected errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

These changes are as follows:

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Note that the source has requested to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be

short (i.e. less than 6 months and less than 1 year).

- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Section I - General Activities and Summary

- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit. In addition, General Conditions 3.d & 3.g (common provisions, affirmative defense) were added as a State-only requirement.
- Minor language changes were made to Condition 3.1 to more appropriately reflect the status of the source with respect to PSD.
- Based on comments made by EPA on another operating permit, the phrase "Based on the information provided by the applicant" was added to the beginning of Condition 4.1 (112(r)).

Section II - Specific Permit Terms

- The tables and permit language in II.2 & II.3 have received minor format and language changes to match recently issued permits.

Section III – Permit Shield

- The citation in the permit shield was corrected.

Section IV - General Conditions

- Added language from the Common Provisions (new condition 3). With this change the reference to "21.d" in Condition 20 (prompt deviation reporting) will be changed to "22.d", since the general conditions are renumbered with the addition of the Common Provisions.
- The upset language in Condition 3.d has been replaced with the affirmative defense provision for excess emission during malfunctions language.
- Removed the upset and breakdown provisions from Condition 4 (emergency provisions) since they are included in the Common Provisions.
- Condition 5 – "upset" was replaced with "malfunction".

- The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from “Reg 1” to “Reg 9”.
- The definition of “prompt” has changed. Condition 21 has been updated.
- The language in 22d has been modified slightly.

Appendices

- Appendix B & C have been updated to the current version (02/20/2007). The requirement to determine if data was continuous has been removed from Appendix C.
- The table in Appendix F was cleared.